DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
Environmental Sciences Division
Water Quality Bureau
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MONTANA GROUND WATER POLLUTION CONTROL SYSTEM
FIELD INSPECTION REPORT

ID NO:	499
SITE NAME:	Columbia Falls Aluminum Company
INSPECTION DATE:	08/14/91
INSPECTION TYPE:	GWPCS
INSPECTOR(S):	Tim Byron and Terry Webster
NAME OF CONTACT:	Tim Furlong
CONTACT ADDRESS:	P.O. Box 10, Columbia Falls, MT 59912
PHONE:	(406) 892-3261

BACKGROUND:

The Columbia Falls Aluminum Company (CFAC) has MGWPCS permit number 0005 to operate percolation ponds and landfill leachate ponds at it aluminum reduction plant near Columbia falls.

INSPECTION RESULTS:

We arrived at the CFAC facility at 8:20 am, introduced ourselves, presented our credentials, and signed in at the plant entrance check station. We were soon met by Mr. Tim Furlong, the CFAC environmental coordinator. Mr. Furlong introduced us the plant manager, Mr. Don Ryan. We spoke briefly with Mr. Ryan and informed him of our intentions to sample the leach ponds, percolation ponds, monitoring wells, and Flathead River. He suggested that Mr. Furlong give us the tour of the Al reduction process.

Mr. Furlong conducted a tour of the "pot room" containing the individual reduction vessels. He explained how they worked, what raw materials were required, and the

process for monitoring and replacing each vessel when the liner materials began to deteriorate. The tour continued to the casting area where molten Al was cast into ingots. The first portion of the tour was completed at 10:40 am.

Our first sampling stop was made at the landfill site located northeast of the plant buildings. Samples for total cyanide (CN) and Fluoride (F) analysis were taken from the edge of the south leach pond and photos of the pond were taken. We drove to the north leach pond on the opposite end of the landfill. Several photos were taken of the north leach pond.

Our next stop was the north percolation pond that received process water from the plant. The inlet pipe to the pond was sampled for total CN, total F, and volatile (VOC) and semi-volatile organic carbon. The water in the pond had black, oily appearance. We then inspected the pond to the northwest of the north percolation pond and the small canal that connected them. Samples for CN, F, VOC, and semi-VOC were collected from well CF-MW-2, the EPA monitoring well installed below the north percolation pond. The well measured 52.0 feet deep. Static water level was 40.7 feet from the top of the casing. Sampling of CF-MW-2 was completed at 12:15 pm.

During the afternoon, samples were then taken from production well No. 5 located to the southeast of the plant. Static water level was measured at 107.7 feet. Samples were taken for Semi-VOC, VOC, CN, and F. Our next stop was the inlet pipe to the south percolation pond located to the south of the plant on a low bench above the Flathead River. Photos were taken along with samples for CN and F. The inspection continued with sampling from the Flathead River at points above and below the south percolation ponds. Several seeps along the river's edge were also sampled for Cn and F. Samples for CN, F, and VOC were taken from well TW-8 located between the landfill and the plant buildings. Static water level in this well was 95'10". The well required approximately 1.5 hours of pumping prior to sampling. Sampling concluded at well TW-2 located to the west of the plant parking lot on the west side of the facility. Samples for CN, F, and VOC were collected from TW-2.

We then took a brief tour, with Mr. Furlong, of the plant area where the Al reduction pots were dismantled. We were also shown the process for rebuilding the anode portion of the pots. The inspection concluded at approximately 3:40 pm.